

Seismic Safety Commission Meeting

April 11, 2024

California Governor's Office of Emergency Services
Seismic Safety Commission
[AB 100 Annual Reporting Requirement](#)

University of California Office of the President

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PURPOSE OF THE REPORT

The Alfred E. Alquist Seismic Safety Commission (SSC) was established in 1975 to advise the Governor, Legislature, State and local agencies, and the public about strategies to reduce earthquake risk.

Assembly Bill 100 (Committee on Budget) enacted as Chapter 20 of the Statutes of 2020, established an annual reporting requirement of the SSC. AB100 recognizes that numerous agencies at various levels of government have substantial responsibilities in the fields of earthquake preparedness and seismic safety. As part of this annual reporting requirement, the SSC has requested that the University of California provide a report that highlights our seismic programs, policy, and guidelines.

EXECUTIVE SUMMARY

The [University of California's Seismic Safety Policy](#) was voluntarily developed in 1975 to provide an acceptable level of earthquake safety for students, employees, and the public who occupy University facilities located in California. While the University of California (UC) is not required to have existing buildings meet the same standards as new construction, UC leaders determined that UC has an ongoing commitment to the safety and well-being of the UC community, and to mitigate the potential risks to the community.

The Policy is reviewed and updated over time to incorporate evolving knowledge in seismology, structural engineering, geotechnical engineering, lessons learned from past earthquakes, as well as updates to the California Building Code. Technical advice is provided by the UC Seismic Advisory Board, a group of independent structural and geotechnical engineers with seismic expertise who have been appointed by the UC Office of the President (UCOP). The University has also developed and maintains the [UC Seismic Program Guidelines](#) to help facilitate the implementation of the Policy.

The UC Seismic Safety Policy is applicable to all University facilities within California except (1) those under the regulatory authority of the Office of Statewide Hospital Planning and Development or (2) K-12 schools or community college facilities constructed after 2018 under the regulatory authority of the Division of the State Architect.

University of California Locations



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Figure 1: Map of California showing University of California Campus Locations

PROGRAM

The University occupies approximately 150 million gross square feet (gsf) of built space with roughly 60 percent of this space constructed in the last (20th) century. An initiative was launched in June 2018 to seismically reevaluate and rate the inventory of over 6,000 of UC's California buildings covered by the Policy including our academic campus locations, UC Office of the President (UCOP), Lawrence Berkeley National Laboratory (LBNL), and UC Agriculture and Natural Resources (ANR). The evaluations were conducted by licensed structural engineers in a consistent manner throughout the system, in accordance with the process outlined in the UC Seismic Program Guidelines. The reevaluation effort was completed in January 2021.

Our assessments established an initial Seismic Performance Rating (SPR), based on a variety of factors including the building's location, construction type, occupancy, and other risk factors. As shown in Table 1, a higher SPR rating equates to more risk. Buildings with a SPR of IV or less are compliant with policy. At the completion of the seismic assessments in 2021, approximately 70 percent of UC buildings covered by the Policy were identified as compliant. Approximately 30 percent or 47 million gsf were determined to be out of compliance with Policy.

Table 1 – Seismic Performance Rating Policy Implications

Rating	UC Seismic Safety Policy Implication
I, II, III, or IV	UC Seismic Safety Policy compliant
V	Will require further evaluation and, if rating is confirmed, must be addressed in order of priority
VI	Priority for improvement
VII	Must be unoccupied and access must be restricted

UC owned buildings that are not in compliance with the Policy have been assigned by each location to a seismic improvement Priority Group A, B, or C. Seismic improvement prioritization considers a range of factors, including the building’s SPR, occupancy risk, collapse risk, mission-criticality, logistics, and is consistent with the UC Seismic Program Guidelines. Priority Group A buildings are considered a priority for improvement compared to Priority Group B and C buildings. Table 2 provides a systemwide summary by Priority Group. This information is updated and reported annually to the Office of the President in the form of Campus Seismic Plans. Adjustments might be made based on the availability of funding, implementation of other location-related projects, and need.

UC systemwide Priority Groups A, B, and C consist of approximately 43 million gsf planned for seismic improvement. Priority Group A consists of approximately 18.9M gsf, Priority Group B consists of approximately 13.7M gsf, and Priority Group C consists of approximately 10.4 gsf.

Table 2 – Seismic Priority Group Building Count and Area

Priority Group	Building Count	Approx. Building Area (Square Feet)
A	346	18,900,000
B	364	13,700,000
C	816	10,400,000
Total Groups A, B, and C	1,526	43,000,000

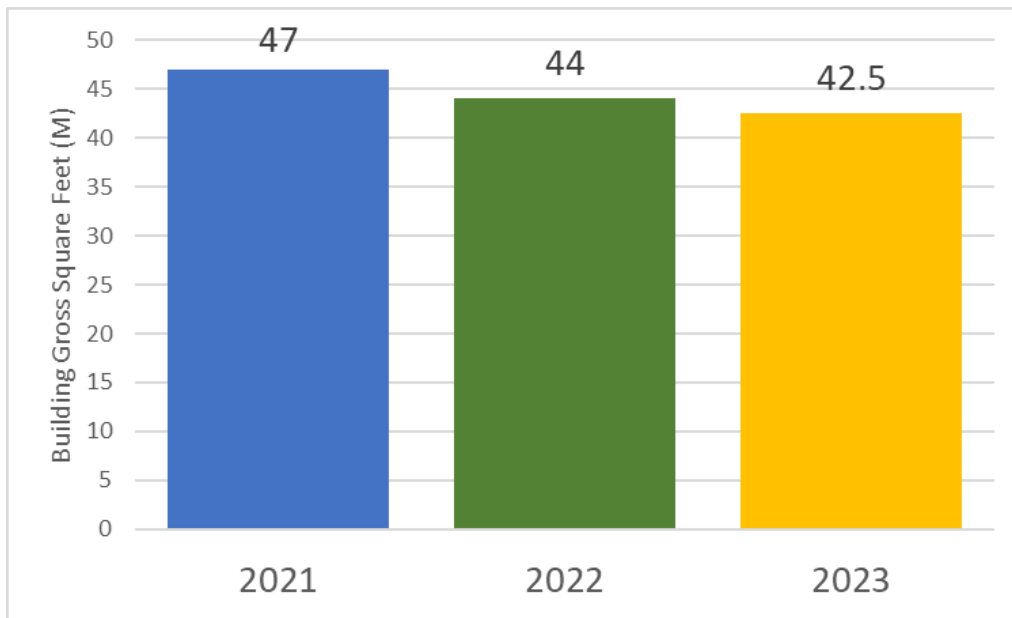
PROGRAM STATUS

Our 2017 policy requires that we take action to upgrade or vacate all noncompliant facilities by 2030. Since 2021, the University has reduced its Policy non-compliant building area by about ten percent or 4.5 million gsf (see Table 3).

Table 3: University Owned Buildings Requiring action by 2030

Table 1: University-owned buildings that require seismic improvement by 2030

University-owned buildings* that require action by 2030 under UC's current Seismic Safety Policy (MGSF)



* Figures exclude hospitals and other facilities regulated under OSHPD/HCAI, all UC-occupied leased space, and all OCIO investment properties.

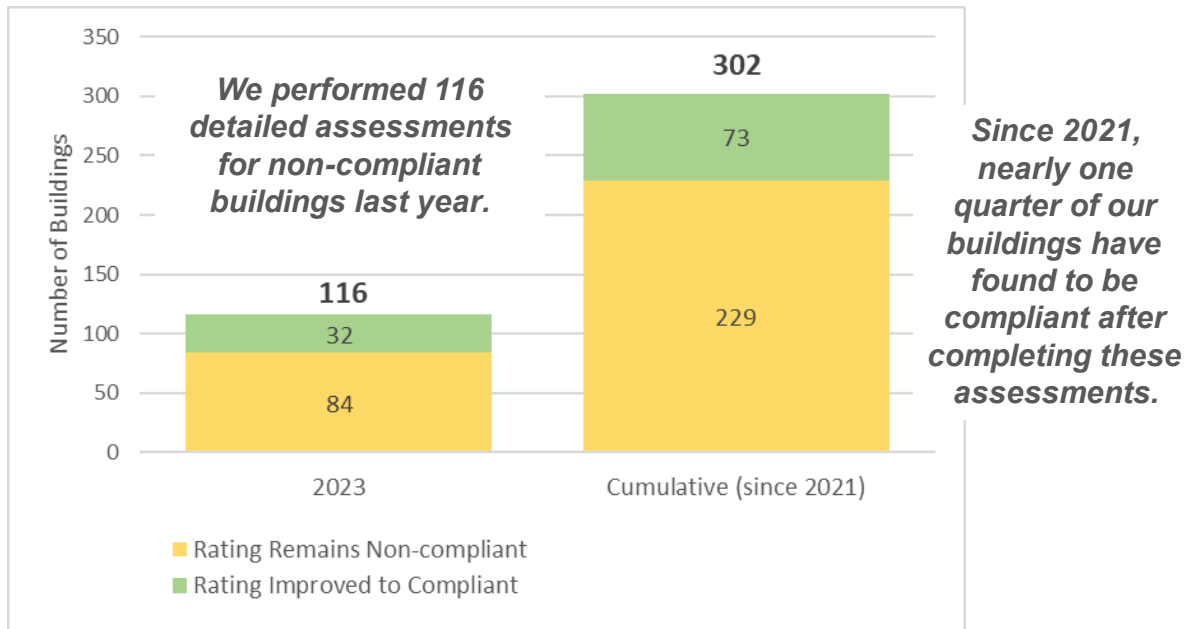
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The improvements that were made were the result of the completion of 30 seismic retrofit projects, the demolition of 25 buildings, and the reassessment of over 300 buildings through a Tier 2 and Tier 3 process that has resulted in an improved classification and compliance of 73 buildings (see Table 4). These more in-depth assessments use more detailed structural and geotechnical engineering analyses and testing methods and may include computer simulation, field testing, and detailed structural calculations as necessary to confirm and, in some cases, improve building ratings. Additionally, further evaluation identifies the specific scope that should be undertaken to improve the safety of a building.

Systemwide, more than 10 seismic improvement projects are currently in construction,

approximately 170 buildings are planned for demolition, and more than 25 seismic improvement projects have received budget approval. We have identified an additional 450 seismic Tier 2 and 3 evaluations that are either currently in the planning phase or in progress.

Tier 2/3 Seismic Evaluations and Results



FINANCIAL

The 2023-2029 Capital Financial Plan (CFP) was approved by the UC Board of Regents in November 2023. It represents approximately \$1.8 billion of identified funding to specifically address seismic projects over the next six years.

Table 5 summarizes the 2023 estimated systemwide capital need to address seismic improvements for buildings not in compliance with the Policy. It totals about \$19.6 billion in total capital need, with about \$13.7 billion specific to seismic. About 75 percent (i.e., \$14.7 billion) is associated with State supportable space, with the remaining 25 percent (i.e. about \$4.9 billion) associated with space that is not State-supportable. Of the total capital need, approximately nine percent (i.e. \$1.8 billion) has identified or proposed funding sources, with the remaining 91 percent (i.e., about \$17.8 billion) without funding sources identified. From 2022 to 2023, the total capital need increased by about two percent (from \$19.2 to \$19.6 billion), and the amount of funded capital need decreased by about nine percent (i.e., about \$1.9 to \$1.8 billion). The amount of capital need without a funding source identified increased by about four percent (i.e., about \$17.2 to \$17.8 billion), primarily the result of construction cost escalation.

Table 5: 2023 UC Systemwide Estimated Seismic Need

Total Seismic Need ¹	State ²	Non-State ³	Funding Identified	Funding Not Identified
\$13.75B	\$10.31B (75%)	\$3.44B (25%)	\$1.82B	\$17.8B

Over the past decade, seismic improvement projects have primarily been funded using University General Revenue Bonds with debt service supported by campus resources or State General Funds appropriations (AB94 Funding). Since fiscal year 2015-2016, the University has approved over \$646 million in AB94 Funding for seismic improvement projects (see Table 6).

In March of 2020, Proposition 13 was put before the California voters. The Proposition was for \$15 billion to modernize and build public schools, community colleges, and universities, with \$2 billion to be allocated to the University of California. The measure failed with the voters and so the funds that would have been allocated to UC were not available to help support our seismic program. While the future capital need exceeds campuses' current funding and debt capacity, the University will continue its allocation of existing resources to address our seismic needs, and in parallel, explore additional

¹ Costs provided are approximate and based on limited project information, see below for additional cost assumption details.

"Seismic Need" refers to seismic improvement scope and building code upgrades triggered by the seismic improvement scope, plus associated project soft costs.

² "State" refers to the approximate dollar amount and percent (%) of Total Seismic Need that is State-supportable.

³ "Non-State" refers to the approximate dollar amount and percent (%) of Total Seismic Need that is not State-supportable.

funding opportunities that may become available over time, such as the continued use of AB94 Funding or future State General Obligation Bonds or Lease Revenue Bonds.

Table 6: State Supported Funding for Seismic Upgrades of Existing Facilities

State-supported Funding for Seismic Upgrades of Existing Facilities (\$M)

Year	AB94 Seismic
2015-16	77.8
2016-17	0
2017-18	8.0
2018-19	61.0
2019-20	116.8
2020-21	243.9
2021-22	116.7
2022-23	21.9
2023-24	0
Total	646.1

CHALLENGES

The current volatility in construction cost escalation adds a layer of complexity and uncertainty in the University’s strategic planning efforts. Investment in capital assets must consider the most effective utilization of limited resources, leverage opportunities to combine aging capital asset improvement efforts (e.g., restoration and renewal, energy improvements, and program modernization), and contemplate outside investment and resources. Additionally, if adequate funding was provided, the program would need to be supported by an increase in staffing at campuses to oversee and support the capital improvement programs.

Avoiding disruptions to core University business functions due to construction of seismic retrofits is vital. Many campuses have limitations on the availability of surge/swing space for relocation of programs during construction. Continuity in instruction and research is of the utmost importance and may be affected due to lack of available,

appropriate surge/swing space. The scale and magnitude of required planning and coordination increases complexity, and often necessitates construction of appropriate replacement space. Wayfinding and circulation may be affected for students, faculty, staff, and neighboring communities in and around campuses.

NEXT STEPS

Despite efforts to address seismic needs UC is far from completion of those efforts. The development of our systemwide Campus Seismic Plans Annual Update has identified approximately 335 projects that are of the highest priority.

The existing UC Seismic Safety Policy requires that all buildings come into compliance by December 31, 2030. The limited availability of funding makes meeting that deadline challenging. UC is currently in the process of revising the Seismic Safety Policy, reassessing future actions to better align with the realities of funding. Our goal is to provide continual improvement in lieu of a single deadline for compliance, allowing us to focus on our highest priority buildings.

As demonstrated by efforts and progress made in the past years, UC campuses and locations' commitment to delivering and sustaining safe, efficient, and high-quality facilities remains paramount. UCOP will continue to collaborate with campuses to incorporate seismic improvement projects into future CFP updates, and to identify strategies for addressing challenges. The University is looking forward to collaborating with State agencies and other organizations to identify and access building and infrastructure funding sources to fulfill UC's capital asset stewardship responsibilities.

Certification

The University of California certifies compliance with Government Code Section 7405 and consistent with the Web Content Accessibility Guidelines (WCAG) 2.9 for this report.